CALIFORNIA PROJECTS

JERRY SANTILLAN, BRAWLEY'S CITY MANAGER, POINTS TO FUTURE GREEN AREAS THAT WILL VISUALLY ENHANCE THE NEW WATER TREATMENT PLANT.

City of San Diego

South Bay Reclamation Projects

Agency Jurisdiction:

- United States Environmental Protection Agency
- State Water Resources Control Board
- Regional Water Quality Control Board

For Information Contact:

Ms. Ann K. Sasaki
Senior Civil Engineer

The City of San Diego

Metropolitan Wastewater Department
Program Management Division
600 B Street, Suite 500
San Diego, CA 92101

Phone: (619) 533-4211
Fax: (619) 533-4211
E-mail: aks@mwadmin.sannet.gov

Project (A) South Bay Reclamation Sewer and Pump Station
Project (B) South Bay Water Reclamation Plant
Project (C) Dairy Mart Road and Bridge Improvements
Project (D) South Bay Secondary Treatment Plant and Sludge Processing Facility
Project (E) South Bay Secondary Sewers, Phase 1

ENVIRONMENTAL NEED/PROBLEM

The City of San Diego is responsible for the treatment of sewage generated in the greater San Diego area - a 450-square mile region from Del Mar to the north, Alpine and Lakeside to the east, and the Mexican border to the south. The City currently operates one treatment plant, the Point Loma Wastewater Treatment Plant. The Metropolitan Wastewater Department (MWWD) was formed to upgrade and expand the sewerage system. The Department is working to add capacity to our sewage system to accommodate projected increases in wastewater flows, supplement our limited water supply and minimize our dependence on imported water by reclaiming wastewater for beneficial reuse, while ensuring our ocean water quality.

To accomplish these objectives, the MWWD is currently planning, designing and constructing numerous wastewater facilities throughout the City. MWWD's planning horizon is to the year 2050. These improvements will provide wastewater treatment to the metropolitan area for a future estimated population of 2.9 million with an expected wastewater flow of 340 million gallons per day. The current system serves a population of 1.8 million generating approximately 190 million gallons per day.

SUGGESTED PROJECTS

Project (A)
The South Bay Reclamation Sewer and Pump Station is part of the South Bay subsystem and is associated with the South Bay Water Reclamation Plant (SBWRP). This project will divert "reclaimable" quality wastewater from the San Ysidro Trunk Sewer and convey it south to the SBWRP. "Reclaimable" quality wastewater is wastewater with a total dissolved solids content of less than 1,000 mg/l. This project includes a pump station, a 30-inch sewer force main from to the pump station to the SBWRP, and an 8-inch interim sludge return line that will convey raw sludge from the SBWRP to the South Metro Interceptor sewer for treatment at the Point Loma Wastewater Treatment Plant.

Estimated Cost:
The estimated construction cost is $21,000,000 and the total project cost is $27,000,000.

Project (B)
The South Bay Water Reclamation Plant is a 7 million gallons per day (mgd), average flow, wastewater treatment plant. This plant will treat the wastewater to tertiary standards for irrigation and industrial use. This plant will provide the additional treatment capacity needed to meet the growing demands of the South Bay/Otay Mesa region and provide a source of reclaimed water to the Tijuana River Valley and the Otay Mesa area. The plant is proposed to be located at the Dairy Mart Road site, adjacent to the international border and the International Treatment Plant.

Estimated Cost:
The estimated construction cost is $76,000,000 and the total project cost is $96,000,000.

Project (C)
The Dairy Mart Road and Bridge Improvements are part of the South Bay subsystem and are associated with the SBWRP. The road and bridge improvements will provide reliable all-weather access across the Tijuana River to the SBWRP and the International Treatment Plant.

Estimated Cost:
The estimated construction cost is $13,000,000 and the total project cost is $19,000,000.

Project (D)
The South Bay Secondary Treatment Plant involves the construction of a 21 mgd conventional activated sludge secondary treatment plant. Process solids from the plant will be sent to the adjacent Southern Sludge Processing Facility for thickening, anaerobic digestion, dewatering and storage. Processed biosolids will be trucked offsite for ultimate beneficial reuse and disposal. This project will provide the additional treatment capacity needed to meet the growing demands of the South Bay/Otay Mesa region and provide relief to the existing South Metro Interceptor Sewer. The plant is proposed to be located adjacent to the South Bay Water Reclamation Plant.

Estimated Cost:
The estimated construction cost is $180,000,000 and the total project cost is $223,000,000.

Project (E)
The South Bay Secondary Sewers, Phase 1 is associated with the South Bay Secondary Plant. This project will divert flow that is currently going north to Point Loma to the new South Bay Secondary Plant. This project includes a pump station and approximately 24,000 feet of 72-inch force main.

Estimated Cost:
The estimated construction cost is $87,000,000 and the total project cost is $113,000,000.

CURRENT STATUS:

Project (A)
The design of the pipeline is expected to be completed by September 1997 and the design of the pump station by December 1997. Construction of the pipeline is scheduled to begin in March 1998. Construction of the pump station is expected to begin in July 1998. The project is expected to be on-line by early 2001.

Project (B)
Construction is expected to begin in December 1997 with the project on-line by the beginning of 2001.

Project (C)
Construction is expected to begin in January 1998 with the project complete by September 1999.

Project (D)
Design is expected to begin in July 1998 with the project on-line by mid-2004.

Project (E)
Design is expected to begin in July 1998 with the project on-line by mid-2004.

County of San Diego

Water and Wastewater Improvements

Agency Jurisdiction:

- United States Environmental Protection Agency
- State Water Resources Control Board
- Regional Water Quality Control Board

For Information Contact:

Mr. George Ream
Program Coordinator

The County of San Diego

Department of Public Works
Wastewater Management Section
5469 Kearny Villa Road, Suite 204
San Diego, CA 92123

Phone: (619) 874-4099
Fax: (619) 874-4050
E-mail: greamxpw@
co.san-diego.ca.us

Project (A) Campo Water And Wastewater Improvements
Project (B) East Otay Mesa Wastewater Collection System

ENVIRONMENTAL NEED/PROBLEM: WATER QUALITY

Project (A)
The border community of Campo, located in south eastern San Diego County, has an existing water and wastewater infrastructure in need of various improvements. Campo is located near the communities of Tecate, United States and Tecate, Mexico and is ideally suited to support NAFTA related border programs.

Suggested Project
Campo Water and Wastewater System Improvements

Estimated Cost:
Campo Improvements - $550,000 (includes engineering and design)

ENVIRONMENTAL NEED/PROBLEM: WATER QUALITY

Project (B)
The development of the East Otay Mesa area along the southern United States/Mexico boundary will require development of a backbone wastewater collection system in order for the planned industrial and commercial development of the area to occur. The area is ideally suited for NAFTA related cooperative Border programs.

Suggested Project
East Otay Mesa Backbone Wastewater Collection System

Estimated Cost:
East Otay Mesa Backbone System - $8,200,000 (includes engineering and design)

CURRENT STATUS:

Project (A)
Campo - Water and wastewater infrastructure currently exist, but due to its age (40+ years), it is in need of various upgrades.

Project (B)
East Otay Mesa - Formation of sanitation district in progress. Specific Land Use Plan adopted for area. Facility Financing Study currently underway. No collection facilities in place. Two discharge interceptor sewers are in place for the western Otay Mesa area which would be sued to discharge effluent from the proposed collection system for East Otay Mesa Sanitation District.

City of Escondido

Regional Water Reclamation Program

Agency Jurisdiction:

- United States Environmental Protection Agency
- State Water Resources Control Board
- Regional Water Quality Control Board

For Information Contact:

Ms. Cynthia Ferguson-Salvati
Water Reclamation/ Conservation Administrator

City of Escondido

Public Works Department
Utilities Administration Division
201 North Broadway
Escondido, CA 92025

Phone: (760) 741-4811
Fax: (760) 432-9512
E-mail: None available

ENVIRONMENTAL NEED/PROBLEM

Project (A) (Potable Water)
The environmental need for developing local water resources is essential to every city in the Californias. Establishing a reliable local water source not only benefits this region but will also help to reduce the demand for importing water from other regions. Like many of the border cities in this region the majority of the water for San Diego County comes from the Colorado River. The Escondido Regional Water Reclamation Program will develop a local water source that will reduce the demand for imported water and by doing so increase the water flow of the Colorado River into Baja California.

In addition to addressing mutual water supply needs, the Escondido Regional Water Reclamation Program will help with the developing of the economic environment in both the San Diego County and in Baja California. This regional program by increasing treatment capacity will provide local businesses, such as Sony that are binational, to expand locally and to create more jobs in both California and Mexico.

Suggested Project
In an effort to better provide for regional water needs and reduce the necessity to import water into the region, the City of Escondido is embarking on a regional water reclamation program. It is the intent of this reclamation program to develop a local water supply that would be utilized by regional customers, instead of imported water. The program has the potential to ultimately provide more than 3.5 billion gallons of reclaimed water annually to residents of Escondido and surrounding communities. Agencies that will be able to participate in the regional project included the cities of Escondido, San Diego and Poway, the Olivenhain Municipal Water District (OMWD), the Valley Center Municipal Water District (VCMWD), and the Rincon Del Diablo Municipal Water District (RDDMWD).

Escondido currently owns and operates a 17.5 mgd secondary wastewater treatment plant. Secondary effluent from the plant is discharge into a 14 mile land outfall which ultimately discharges through an ocean outfall. This first phase of the regional reclamation project entails upgrading the existing on-site secondary treatment facilities to treat and distribute 6 MGD of Title 22 reclaimed water.

Estimated Cost:
The estimated cost of developing and implementing a project to enhance water supplies and employment in both border communities through the Escondido Regional Water Reclamation Program is $63.489 million. This cost reflects planning efforts, engineering work, plant and distribution system construction for the water reclamation program.

Funding for the capital costs of this environmental program will be provided by the City of Escondido's new connection fund and customer fund, other agencies, and loans from the State and Federal government.

Debt service and operating costs of the program will be funded by reclaimed water sales revenues, cash reserves and fees from the City's Utilities Enterprise Fund, and funds from the Metropolitan Water District and the San Diego County Water Authority. Agreements for the funding from MWD and the SDCWA have been executed and are in place to commence as soon as the reclaimed water is being produced and used.

ENVIRONMENTAL NEED/PROBLEM

Project (B) (Wastewater Collection, Treatment and Disposal)
There are numerous wastewater discharges by border communities into creeks and the ocean. Treatment of the wastewater prior to discharge is needed to protect the local environment and environments that are downstream of the discharge. The City of Escondido collects and treats for both Escondido and a portion of the City of San Diego, 15 mgd of wastewater which is then disposed of in an ocean outfall line where the prevailing currents transport it south to Baja California. During intense wet weather periods, there is not enough capacity in the ocean outfall or at the plant to treat the incoming flows to required standards. Consequently, this not adequately treated and unpermitted flow is discharged into the Creek, impacting the lagoon and causing beach closures. An increase in effluent quality and a reduction in discharges is necessary.

Suggested Project
The City of Escondido is required to upgrade its wastewater treatment facility to obtain a permit to discharge into the Creek. A regional water reclamation program to increase treatment to tertiary levels is underway. By implementing the Escondido Regional Water Reclamation program an increase in effluent quality and a reduction in ocean discharges will occur. The program has the potential to reduce ocean discharges by more than 3.5 billion gallons of reclaimed water to residents of Escondido and surrounding communities. Agencies that will be able to participate in the regional project included the cities of Escondido, San Diego and Poway, the Olivenhain Municipal Water District (OMWD), the Valley Center Municipal Water District (VCMWD), and the Rincon Del Diablo Municipal Water District (RDDMWD).

Escondido currently owns and operates a 17.5 mgd secondary wastewater treatment plant. Secondary effluent from the plant is discharged into a 14 mile land outfall, which ultimately discharges through an ocean outfall. This first phase of the regional reclamation project entails upgrading the existing on-site secondary treatment facilities to treat and distribute 6 MGD of Title 22 reclaimed water.

Estimated Cost:
The estimated cost of developing and implementing a project to enhance disposal quality and reduce discharge to border communities through the Escondido Regional Water Reclamation Program is approximately $63.489 million. This cost reflects planning efforts, engineering work, plant and distribution system construction for the water reclamation program.

Funding for the capital costs of this environmental program will be provided by the City of Escondido's new connection fund and customer fund, other agencies, and loans from the State and Federal government.

Debt service and operating costs of the program will be funded by reclaimed water sales revenues, cash reserves and fees from the City's Utilities Enterprise Fund, and funds from the Metropolitan Water District and the San Diego County Water Authority. Agreements for the funding from MWD and the SDCWA have been executed and are in place to commence as soon as the reclaimed water is being produced and used.

CURRENT STATUS:

Project (A)
The Escondido Water Reclamation Program is ready to begin construction of the reclamation facilities. Engineering design plans and specifications are completed and the City has employed a construction manager to comment on the constructability and begin developing construction bid packages for the project. The project has completed facilities' planning and environmental review and has satisfied both CEQA and NEPA environmental requirements. On-site retrofitting design plans for City of Escondido's reclaimed water customers to assure ability to use the water as soon as it is available have been prepared. The City has constructed $630,000 worth of reclaimed water distribution piping. Agreements with regional participants for water purchases are underway and are anticipated to be finalized this year.

Project (B)
The Escondido Water Reclamation Program is ready to begin construction of the reclamation facilities. Engineering design plans and specifications are completed and the City has employed a construction manager to comment on the constructability and begin developing construction bid packages for the project. The project has completed facilities' planning and environmental review and has satisfied both CEQA and NEPA environmental requirements. On-site retrofitting design plans for City of Escondido's reclaimed water customers to assure ability to use the water as soon as it is available have been prepared. The City has constructed $630,000 worth of reclaimed water distribution piping. Agreements with regional participants for water purchases are underway and are anticipated to be finalized this year.

Mountain Empire

Jr. - Sr. High School Sewage Treatment Project

Agency Jurisdiction:

- United States Environmental Protection Agency
- State Water Resources Control Board
- Regional Water Quality Control Board
- Local Governmental Entities

For Information Contact:

Administrator

Mountain Empire
Unified School District
3291 Buckman Springs Road
Pine Valley, CA 91962

Phone: (619) 478-5197
Fax: None available
E-mail: None available

ENVIRONMENTAL NEED/PROBLEM

The Mountain Empire Jr. - Sr. High School complex is located in a valley approximately eight miles east of Pine Valley, California with approximately 900 students and staff. The complex is serviced by a septic system that consists of six septic tanks. The tank sizes are as follows: 1-6,000 gallon, 2-4,500 gallon, 2-1,200 gallon, and 1-1,000 gallon. The environmental need is two fold the elimination of the septic system and the conservation of the underground water supply.

SUGGESTED PROJECT

The sewage treatment plant would eliminate the possible contamination of the underground water supply from nitrates at some time in the future and also conserve the underground water supply by recycling the waste water for the irrigation of the grass and vegetation.

ESTIMATED COST:

$1,225,000.00

CURRENT STATUS:

Currently discussion only

Tecate Water District

Water Distribution And Wastewater Treatment Plant

Agency Jurisdiction:

- International Boundary and Water Commission,
- Comisión Internacional de Limites y Aguas
- United States Environmental Protection Agency
- State Water Resources Control Board
- Regional Water Quality Control Board
- Comisión Estatal de Servicios Públicos, Tecate
- Comisión Nacional del Agua

For Information Contact:

Mr. Tom Hom
Chairman

Tecate Water District

Steering Committee
4408 30th Street
San Diego, CA 92104

Phone: (619) 283-5515 ext. 517
Fax: (619) 280-3346
E-mail: None available

ENVIRONMENTAL NEED OR PROBLEM

The groundwater-dependent community of Tecate, California presently operates on wells and septic systems without any conservation or management of the existing groundwater resource. The capacity for unlimited withdrawal of the water resource without basin recharge, together with the threat of septic system failures, contributes to the possibility of groundwater depletion and/or contamination. Water supply is inadequate to meet fire flow demand and the community lacks a treated drinking water source.

SUGGESTED PROJECT

Establishing water and sewer service in the community would protect the limited groundwater resource. Initial steps to achieve a properly managed basin include a groundwater basin study to identify groundwater capacity and quality of water. A Basin Management Plan would be developed to guide ultimate use of the resource, establish withdrawal and recharge rates as well as create conservation measures to be used by existing and future development. Comprehensively planning water and sewer service with an understanding of the groundwater basin characteristics will provide environmental protection while allowing development to proceed in a logical manner consistent with the County General Plan.

ESTIMATED COST:

A groundwater basin study and basin management plan is estimated to cost approximately $95,000. Development of a water distribution system and wastewater reclamation system, including a reverse osmosis treatment plant and percolation ponds, is estimated to cost $10,770,000. Also included in the 10.7 million are costs for district pre-formation and land/easement acquisition, as well as capitalized interest and reserve funds for financing the project.

CURRENT STATUS:

Preliminary design has been completed for a water distribution and wastewater reclamation system. However, the project may be moving into redesign to identify more affordable alternatives. Possibilities for a smaller initial system are being explored as are possibilities for a binational project with Tecate, Mexico. Tecate, Mexico is directly adjacent and is served by imported water and currently operates a sewer system. Communications are being initiated to determine the status of water and sewer facilities south of the border and the degree to which a binational project might be feasible.

BACK COUNTRY IN TECATE, CALIFORNIA

Otay Water District Projects

Capital Improvement Program

Agency Jurisdiction:

- United States Environmental Protection Agency
- State Water Resources Control Board
- Regional Water Quality Control Board

For Information Contact:

Mr. James F. Peasley
Planning and Budgeting Manager

Otay Water District
2554 Sweetwater Springs Blvd.
Spring Valley, CA 91977

Phone: (619) 670-2242
Fax : (619) 670-8920
E-mail: jpeasley@otaywater.gov

Project (A) Otay Water District Capital Improvement Program (CIP) Project No. 071, Recycled Water Pipeline (RecPL) – Telegraph Canyon Road 16-inch.

Project (B) Otay Water District Capital Improvement Program (CIP) Project No. 163, Ralph W. Chapman Water Recycling Facility (RWCWRF) – Expansion to 2.6 MGD.

Project (C) Otay Water District Capital Improvement Program (CIP) Project No. 178, Recycled Reservoir (RecRes) – Use Area Storage Pond No. 4.

Project (D) Otay Water District Capital Improvement Program (CIP) Project No. 288, Lower Otay Storage/Treatment Capacity.

Project (E) Otay Water District Capital Improvement Program (CIP) Project No. 289, Helix Levy Storage/Treatment Capacity.

Project (F) Otay Water District Capital Improvement Program (CIP) Project No. R052, RecPL – 30-inch, 450 zone, Dairy Mart Road to R002 Connection Point.

Project (G) Otay Water District Capital Improvement Program (CIP) Project No. W288, Rancho Del Rey Well.

Project (H) Otay Water District Capital Improvement Program (CIP) Project No.'s 187, W258, 083. 187 Pipeline (PL) – Central Area and Otay Mesa Interconnection. W258 Pump Station (PS) – Lower Otay Filtration Plant. 083 Pump Station (PS) – (871-1) High Head Replacement and Relocation.

Project (I) Otay Water District Capital Improvement Program (CIP) Project No.'s R034, R060, R061, R062:

R034: RecRes – Tank No. C, 860 Zone, 2.5 MG (I.D. 7).
R060: RecPS – Otay Lake Pump Station, 860 Zone, (2,300 GPM) (I.D. 7).
R061: RecPL – 16-inch, 860 Zone, Otay Lake to Tank No. C (I.D. 7).
R062: RecPL – 16-inch, 860 Zone, Tank No. C to Otay Mesa Road (I.D. 7).

Project (J) Otay Water District Capital Improvement Program (CIP) Potable Water Program.

Project (K) Otay Water District Capital Improvement Program (CIP) Recycled Water Program.

ENVIRONMENTAL NEED/PROBLEM

Project (A)
There is a need for conserving imported potable water supply. This project will provide recycled water transmission service to a major service area with existing markets and developing markets.

Suggested Project
With installation of the recycled water project, existing potable water irrigation demands will be converted to recycled water service. Also, new development activities will be required to provide service to irrigation demands from the recycled water main.

Estimated Cost:
$3,878,000

ENVIRONMENTAL NEED/PROBLEM

Project (B)
There is a need to increase recycled water production at the RWCWRF to supply growing recycled water demands, provide for sewage treatment and disposal and maintain financial advantages of providing local sewage handling capabilities.

Suggested Project
It will be necessary to expand the RWCWRF to produce additional recycled water to an estimated range of 2.6 MGD to 3.8 MGD. The facility will also provide for local sewage treatment and disposal capabilities for a growing collection area with the added advantage of maintaining lower overall costs to sewage customers.

Estimated Cost:
$7,014,000

ENVIRONMENTAL NEED/PROBLEM

Project (C)
In order to conserve imported potable water supply for essential uses and recycled water storage reservoir is needed to store treated sewage water for reuse as recycled for irrigation purposes.

Suggested Project
With installation of the recycled water storage project existing recycled water produced can be stored for recycled water irrigation uses. These improvements will be accomplished on an existing unlined earthen embankment structure.

Estimated Cost:
$2,628,000

ENVIRONMENTAL NEED/PROBLEM

Project (D)
To obtain and provide water treatment and storage at the City of San Diego's Lower Otay Reservoir system in that normal and emergency water supply can be met during supply shortages and outages from imported water deliveries.

Suggested Project
Obtain through purchase and construction by water treatment and storage capacity at the City of San Diego's Lower Otay Reservoir system through an agreement with the City of San Diego.

Estimated Cost:
$17,621,000

ENVIRONMENTAL NEED/PROBLEM

Project (E)
To obtain and provide water treatment and possibly storage at the Helix Water District Levy Treatment Plant so that normal and emergency water supply can be met during supply storages and outages from imported water deliveries.

Suggested Project
Obtain through purchase and construction of water treatment and possibly storage capacity at the Helix Water District's Levey Water Treatment facilities through an agreement with Helix Water District.

Estimated Cost:
$8,000,000

ENVIRONMENTAL NEED/PROBLEM

Project (F)
There is a need for conserving imported potable and raw water supply. This project will provide for the second required source of recycled water to meet existing and future demands.

Suggested Project
With the installation of the recycled water project, recycled water from the City of San Diego proposed South Bay Water Treatment Plant will be transmitted to the Otay Water District Central Area system.

Estimated Cost:
$4,820,000

ENVIRONMENTAL NEED/PROBLEM

Project (G)
There is a need for additional local water supply to supplement imported water.

Suggested Project
There is a ground water supply available in Rancho Del Rey. Development and integration into the District's water system facilities is planned.

Estimated Cost:
$2,777,000

ENVIRONMENTAL NEED/PROBLEM

Project (H)
There is a need to connect the existing Otay Mesa and Central Area together to provide reliability, flexibility, improve water quality, lower operating costs, and conserve capital costs through access to existing potable storage and access to water treatment facilities and raw water supply.

Suggested Project
These three projects will provide the pumping and transmission facilities necessary to transmit water between Otay Mesa and Central Area and provide the transmission facilities to receive potable water from the Lower Otay Reservoir/SDCWA treatment/storage/delivery systems. Lower operating costs will be achieved with less energy consumption and removing an existing pump station from service. Water quality will be improved within reservoir storage due to improved water transmission through a large reservoir and greater demand.

Estimated Cost:
187 - $13,898,000; W258 - $2,798,000; 083 - $3,105,000.

ENVIRONMENTAL NEED/PROBLEM

Project (I)
There are existing and future large demands for potable water on Otay Mesa (I.D.7) that can be supplied with raw and/or recycled water.

Suggested Project
With the installation of the above described projects raw water and eventually recycled water as well will be available to supply existing demands and future demands in lieu of potable water thus conserving potable water for other uses.

Estimated Cost:
R034: $1,031,000; R060: $979,000; R061: $2,100,000; R062: $2,600,000.

ENVIRONMENTAL NEED/PROBLEM

Project (J)
There is a need to resolve current potable water transmission storage and pumping deficiencies and provide for expansion of the facilities to accommodate growth.

Suggested Project
The District has a comprehensive plan to produce, acquire, store, pump, transmit and distribute potable water throughout the entire Otay jurisdiction to upgrade existing facilities and construct new facilities.

Estimated Cost:
The total estimated cost for the potable water facilities is $490,000,000.

ENVIRONMENTAL NEED/PROBLEM

Project (K)
There is a need to conserve local and imported water supplies and as a result to reuse recycled water wherever and whenever possible.

Suggested Project
The District has a comprehensive plan to produce, acquire, store, pump, transmit and distribute recycled water throughout the Central Area and Otay Mesa areas of the District.

Estimated Cost:
The total estimated cost for the recycled water facilities is $33,376,000.

CURRENT STATUS:

Project (A)
The project is currently in design and construction is anticipated to begin in the spring of 1998.

Project (B)
The project is in the long range planning stage estimated to begin 2003.

Project (C)
The project is currently in construction and is approximately 50 percent complete.

Project (D)
The estimated implementation for plant expansion is 2005. Negotiations for the agreement are continuing.

Project (E)
The estimated implementation for plant expansion is beyond 2005. Negotiations for the agreement are ongoing.

Project (F)
This project is in the preliminary planning stage with an estimate construction date of the Summer of 2001.

Project (G)
The project is in preliminary design and is planned to start construction in the fall of 1997.

Project (H)
CIP 187 is currently in final design with construction anticipated to begin in fall 1997. CIP 083 is currently beginning design with construction anticipated to begin summer 1998. CIP W258 is currently in the preliminary design phase with construction anticipated in summer 2000.

Project (I)
These project facilities are currently in the preliminary design stage phase. Construction is estimated to begin the summer of 2001.

Project (J)
The potable water system program is an ongoing capital investment program over about a forty year period.

Project (K)
The recycled water system program is an ongoing capital investment program over about a forty-year period.

Aguaclara LLC

Bajagua Water Treatment Plant

Agency Jurisdiction:

- International Boundary and Water Commission,
- Comisión Internacional de Limites y Aguas,
- United States Environmental Protection Agency
- State Water Resources Control Board
- Regional Water Quality Control Board
- Secretaria de Asentamientos Humanos y Obras Publicas,
- Comisión Nacional del Agua

For Information Contact:

Mr. Enrique Landa
Managing Member

Agua Clara LLC
Box 67-5864
Rancho Santa Fe, CA 92067

Phone: (760) 792-7661
Fax: (760) 481-7307
E-mail: None available

ENVIRONMENTAL NEED/PROBLEM

The Tijuana/South Bay San Diego Region faces the problems of properly treating wastewater to avoid health and environmental problems and ensuring reliable long-term supply of water to support future growth. The Tijuana region currently generates about 45 million gallons a day of wastewater. The region grows at approximately five percent per year. The newly constructed International Wastewater Treatment Plant addresses some of these concerns and is able to provide advanced primary treatment. To meet minimum environmental standards, federal law and treaty between the U.S. and Mexico, provides for secondary treatment for 25 MGD of the primary effluent.

SUGGESTED PROJECT

The Bajagua Project involves three basic elements that will address meeting minimum environmental standards: effluent conveyance, wastewater treatment and water production and conveyance. Effluent conveyance would include a pump station and conveyance of the 25 MGD of primary effluent from the IWTP to a new wastewater plant to be constructed at the Rio Alamar area. Secondary, tertiary and advanced water treatment facilities for the primary effluent will be constructed and operated at the Rio Alamar site.

ESTIMATED COST:

Between $15,000,000 and $79,000,000

CURRENT STATUS:

Proponents for the Bajagua project requested their project be considered as an alternative in the Supplemental Environmental Impact Statement for the IWTP. A BECC Step I pre-proposal application has been submitted. Discussions with U.S. and Mexican authorities at various levels are underway to determine feasibility.

City of Brawley

Wastewater Treatment Facility Project

Agency Jurisdiction:

- United States Environmental Protection Agency
- State Water Resources Control Board
- Regional Water Quality Control Board

For Information Contact:

Mr. Jerry Santillan
City Manager
400 Main Street
Brawley, CA 92227

Phone: (760) 344-9111
Fax: (760) 344-0907
E-mail: None available

ENVIRONMENTAL NEED/PROBLEM

The City of Brawley is under an order from the Regional Water Quality Control Board (Board) to meet compliance with current State and Federal standards. The current plant is able to handle up to 3.9 MGD (million gallons per day) and at times operates at 92% capacity. Particularly, during storms, the flow to the plant can be overwhelming to the liquid processes. The Board has determined that the City needs to start design for upgrade, expansion and or build a new plant.

SUGGESTED PROJECT

Expansion of the current wastewater treatment facility would alleviate the City's water quality problem. The new project consists of a primary treatment plant and a secondary lagoon system with liquids and solids treatment processes. The expansion of the new plant will increase its total capacity to 6.0 MGD, with a hydraulic capacity to perform adequately at combined storm and wastewater flows of up to 15.3 MGD. The City is under a Board order to make the proposed improvements by the year 2000. Once completed, the facility will be able to meet requirements from the Regional Water Quality Control Board, USEPA and County Health Department.

ESTIMATED COST:

$7,000,000

CURRENT STATUS:

Design is at 90% completion. The City has submitted a BECC Step I application form. It is anticipated that the project will seek BECC certification by end of 1998. Very recently, the City was awarded a $200,000 Technical Assistance grant from the BECC to help fulfill Step II application requirements and an IDP grant from the NADBank to conduct a System Rate Study. This project marks the City's second water infrastructure project under the BECC-NADBank process.

City of Calexico

Water Treatment Plant Expansion Project, Phases I & II

Agency Jurisdiction:

- California Department of Health Services
- United States Environmental Protection Agency

For Information Contact:

Mr. Mariano Martinez
Public Works Director

Department of Public Works
608 Heber Avenue
Calexico, CA 92231

Phone: (760) 768-2180
Fax: (760) 357-5864
E-mail: calexicopwd@yahoo.com

ENVIRONMENTAL NEED/PROBLEM

The environmental need that exists in the City of Calexico is water. Per the California Department of Health Services office of Drinking Water, the present City of Calexico water treatment plant is deficient in numerous areas, In addition the City is experiencing growth which exacerbates the deficiencies. The following summarizes the historical background of the City's water treatment plant and the listed deficiencies.

BACKGROUND

The City of Calexico obtains its drinking water from a surface water supply, the Colorado River. The City comes under the water quality standards established by the United States Environmental Protection Agency and the State of California Department of Health Services Office of Drinking Water. Current water quality requirements have been established in the 1986 Safe Drinking Water Act Amendment and the Surface water Treatment Rule.

The City's water treatment plant, called Plant A, was initially constructed in 1949 with primary facilities consisting of a clarifier, filters and disinfection system. In 1965 the treatment plant was expanded, and Plant B consisting of another clarifier and a "Greenleaf" filter, was added. In 1990, the Plant A clarifier was refurbished and the filter was converted to a conventional type multi-media filter.

DEFICIENCIES

Many of the plant treatment facilities are almost 50 years old and are approaching the end of their useful life. The California Department of Health Services Office of Drinking Water have identified numerous deficiencies in the treatment plant that compromise the ability to provide properly treated and disinfected drinking water that meet the current applicable regulations on a continuous basis. Major deficiencies include:

The Plant A clarifier is 300% hydraulically overloaded and the Plant B clarifier is 200% hydraulically overloaded.

The Plant B "Greenleaf" filters in its present configuration is not an acceptable filtering system that meets the Health Department's present requirements.

The existing chemical feed systems are inadequate and must be improved. Aqua-ammonia facilities must be added to stop the formation of disinfected by products.

Auxiliary equipment such as turbidimeters and filter to waste capabilities must be incorporated into the plant.

SUGGESTED PROJECT

For the water treatment plant, improvements will require new structures but improvements to existing structures will also be done in order to minimize the size if the new structures and construction costs. Proposed facilities are as follows:

PROPOSED FACILITIES

In order to comply with the current regulations and correct the above deficiencies, the major proposed facilities will incorporate the following:

New clarifier – This will reduce the hydraulic loading of the existing clarifiers to acceptable levels.

New multimedia filters with state-of-the art monitoring and operational schemes. These filters will replace the existing obsolete and unacceptable "Greenleaf" filters.

Improved chemical feed systems with the addition of an aqua-ammonia storage and feed system.

Necessary electrical system improvements, piping and valving modifications and auxiliary equipment to make the new facilities completely functional and operational.

The mechanical equipment of the Plant "B" clarifier will be replaced in order to bring the Plant "B" clarifier into conformance with current standards.

The existing "Greenleaf" filter structure will be converted into a backwash recovery tank. This will reduce the amount of water discharged to waste at the treatment plant. Thus, more fresh water will be available for other uses.

An additional storage tank, pipeline, and booster pump station will be constructed on the eastern section of Calexico that will provide more storage and better water pressure in this section of the City.

ESTIMATED COST:

Item	Estimated Cost
Treatment Plant Engineering Design	$ 240,000.00
Distribution and Storage Engineering Design	$ 190,000.00
Treatment Plant Construction (Phase I)	$ 6,400,000.00
Distribution Main (Phase II)	$ 1,400,000.00
Storage and Booster Pump (Phase III)	$ 2,800,000.00
Administration, Other Engineering, Testing & Inspection Fees	$ 300,000.00
Total project Funding	$11,330,000.00

CURRENT STATUS:

a) For the water treatment plant, plans and specifications have been prepared.
b) The distribution main, storage reservoir and booster pump station, the City is awaiting funding to begin design of the distribution main, storage reservoir and booster pump station.

A BECC Step II application is completed, NADBank is currently conducting a financial analysis. The City was recently awarded a Technical Assistance grant to help in fulfilling Step II requirements and an IDP grant from the NADBank. It is anticipated this project will seek BECC certification in June 1998.

Descanso Community Water District

Descanso Facilities Replacement Project

Agency Jurisdiction:

• San Diego Department of Health Services

For Information Contact:

Mr. Larry Linder
General Manager

Descanso Community Water District
P.O. Box 610
Descanso, CA 91916

Phone: (619) 445-2330
Fax: (619) 445-7496
E-mail: None available

ENVIRONMENTAL NEED/PROBLEM

The community of Descanso is in need of making improvements to its current water delivery system. A 1996 sanitary survey conducted by the local health department indicated the District's wells were high in iron and manganese levels, often exceeding secondary MCL. The system which is constructed of various materials, amongst these, galvanized, asbestos and glued plastic pipes, which do not meet current pipe standards for a public utility. During the past year, the system experienced 38 leaks. Additionally, the District is under a compliance order for inadequate storage.

SUGGESTED PROJECT

The community of Descanso is planning to replace an obsolete main line distribution pipe, increase storage capacity, rehabilitate failing wells, reduce water usage and increase water conservation.

ESTIMATED COST:

$4,040,000.00

CURRENT STATUS:

The project is currently in the preliminary design phase with no estimated construction date set.

A BECC Step I application has been submitted. Step II application is currently being completed. Very recently, Descanso Community Water District was awarded a $100,000 Technical Assistance grant from the BECC to help in fulfilling Step II application requirements.

It is anticipated this project will seek BECC certification by end of 1998.

Agrari Environmental Corporation

San Diego Tire Pyrolysis And Recycling Plant

Agency Jurisdiction:

- Integrated Waste Management Board
- Air Pollution Control District

For Information Contact:

Mr. Ramiro Rivas
Executive Director

Agrari Environmental Corporation
517 Emerson Ave.
Calexico, CA 92231

Phone: (760) 357-2529
Fax: None available
E-mail: None available

ENVIRONMENTAL NEED/PROBLEM

The county of San Diego generates approximately 2.7 million waste tires annually, while many of these tires are recycled or disposed through established mechanisms, many are illegally dumped. Waste tires that are Illegally dumped represent a disease vector associated with habitat for mosquitoes, skunks, rats and other disease bearing insects and animals. If ignited, abandoned tires create enormous amounts of air pollutants including sulfur dioxide and partially consumed hydrocarbons are released to be absorbed into the ground and will contaminate any available ground water with aromatic hydrocarbons such as benzene and toluene. Tires are not biodegradable; they will lay wherever deposited to be a source threat to the environment until picked up and recycled.

SUGGESTED PROJECT

The Argai Environmental Corporation plans to construct and operate a tire recycling plant at a site located at Otay Mesa.

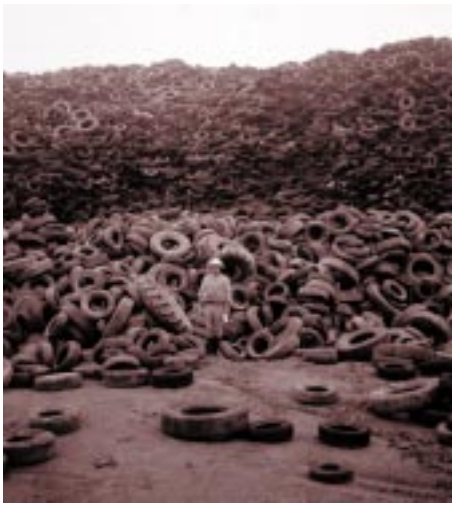
This plant will have an annual capacity for approximately 3 million waste tire equivalents. * Tires, including truck and bus tires will be shredded at the plant site. The shreds will be heated to produce carbon black and a high grade of clear oil. These two products can be recycled into new rubber products. The steel in the tires will be recovered and sold to scrap steel buyers for recycling into new steel products. (*a waste tire equivalent (WTE) weighs 18.7 pounds). The plant will have an employment base of approximately 30 employees. The technical process will meet all the environment codes and regulations of the local, city, county, state and federal authorities. Usage of water is minimum at approximately 8 GPM. No plant process waste water is produced since closed, recycled washing and cooling systems are utilized.

ESTIMATED COST:

$11,000,000

CURRENT STATUS:

Design for the project is complete. Construction will begin as soon as funding is secured. It is anticipated that construction of the entire plant could be accomplished in approximately six months. Project will be seeking BECC certification by end of 1998.



CALIFORNIA PRODUCES APPROXIMATELY 30 MILLION WASTE TIRES ANNUALLY.

Heber Public Utility District

Water And Wastewater Treatment Facilities Project

Agency Jurisdiction:

- California Department of Health Services
- Regional Water Quality Control Board
- State Water Resources Control Board

For Information Contact:

Mr. Steve Hogan

Heber Public Utility District
1085 Ingram Ave.
P.O. Box H
Heber, CA 92249

Phone: (760) 353-0323
Fax: (760) 353-9951
E-mail: SCH1253@aol.com

ENVIRONMENTAL NEED/PROBLEM

The community of Heber currently has a failing water and wastewater treatment facilities. Existing problems include: exceeding capacity at the wastewater treatment plant and inability to provide adequate water supply to the residents in the community due to outdated water filtration system. Other problems include: the need to replace an aging infrastructure for the collection of wastewater and the distribution of water, replacement of a wastewater lift station, establish an ongoing main replacement program, replace major gate valves, construct additional main pipelines for system redundancy.

SUGGESTED PROJECT

Upgrade and/or replacement both failing systems. This would include: 1) a new wastewater plant with additional sludge drying bed, headworks, and lining emergency flow equalization basins with impermeable materials and pumping equipment; 2) a new water plant, new headworks, additional sedimentation pond pipes, valves and filters, lining of two sedimentation ponds with concrete to prevent erosion and collapse, a decanting station for backwashing filters, and a new 1.0 million gallon water storage tank. 3) Water and sewer main replacement program for aging infrastructure 4) replacement of a sewer lift station to prevent overflows and contamination of occupied dwellings, streets and alleys. 5) Replace a 10 year old Water/Sewer Billing System (including route scheduling and maintenance) 6) Replace/repair broken and corroded gate valves.

ESTIMATED COST:

$4,500,000

CURRENT STATUS:

Preliminary discussion and planning is underway. BECC Step I application will be submitted and potential funding sources identified.

Olivenhain Municipal Water District

Olivenhain Water Storage Project

Agency Jurisdiction:

- State Water Resources Control Board
- Regional Water Quality Control Board

For Information Contact:

Mr. David C. McCollom
General Manager

Olivenhain Municipal Water District
1966 Olivenhain Road
Encinitas, CA 92024

Phone: (760) 753-6466 xtn. 114
Fax: (760) 753-5640
E-mail: omwdgm@mailhost2.csusm.edu

ENVIRONMENTAL NEED/PROBLEM

This project will provide substantial community benefits. The potable water treatment plant will prevent Giardia and cryptocysts from entering the water system as well as optimizing microorganism removal and turbidity reduction from surface water sources. Thus reducing the public's exposure to organisms resistant to disinfection. The water produced will exceed all federal, State and local quality requirements. The project will improve public health, preserve natural environment, maintain an improve the quality of life for region's

SUGGESTED PROJECT

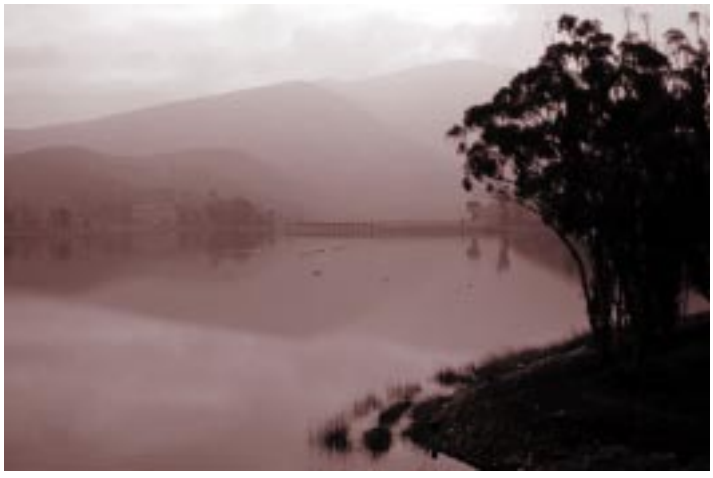
The project consists of an open, raw water storage reservoir with capacity between 6,000 acre feet and 24,000 acre feet, a roller compacted concrete dam, an 82 million gallons per day treatment plant, a raw water pipeline connecting the reservoir to the San Diego County Water Authority Second San Diego Aqueduct, a flow control station, a treated water line, a pump station, the installation of new above ground electrical power poles to provide electric service to the pump station, four staging areas for construction activities and the construction of an access road from Via Ambiente to the reservoir and treatment plant site.

ESTIMATED COST:

$ 65,000,000

CURRENT STATUS:

BECC Step I pre-proposal application submitted. Discussions currently underway with the BECC and NADBank.



OTAY LAKES

Palo Verde Water District

Sewer/Wastewater Treatment System Project

Agency Jurisdiction:

- United States Environmental Protection Agency
- State Water Resources Control Board
- Regional Water Quality Control Board

For Information Contact:

Mr. Dave Crockett
President, Board of Directors

Palo Verde Water District
P.O. Box 185
Palo Verde, CA 92266

Phone: (760) 854-3519
Fax: (760) 854-3053
E-mail: None available

ENVIRONMENTAL NEED/PROBLEM

The community of Palo Verde currently has no sewer system . Many of septic systems are sub-standard or in ill-repair causing septic runoff to leach into the town's groundwater and into the lagoon flowing through town. The groundwater has been deemed unhealthy for domestic use. There is currently a moratorium on building in the area due to inadequate treatment of wastewater.

SUGGESTED PROJECT

The community of Palo Verde proposes to remedy the problem by constructing a wastewater treatment system. Since no system currently exists, this will require the acquisition of land and all new construction.

ESTIMATED COST:

$4,040,000

CURRENT STATUS:

The project is currently in the preliminary design phase with no estimated construction date set.

OXIDATION LAGOONS NEAR THE SALTON SEA

County of Imperial

New River Environment Restoration Project

Agency Jurisdiction:

- United States Environmental Protection Agency
- State Water Resources Control Board
- Regional Water Quality Control Board

For Information Contact:

Richard H. Inman,
County Administrative Officer

County of Imperial
940 West Main Street, Suite 208
El Centro, CA 92243

Phone: (760) 339-4290
Fax: (760) 352-7876
E-mail: richinman@aol.com

ENVIRONMENTAL NEED/PROBLEM

The New River transverses Imperial County from the Mexican Border to the Salton Sea. The river flows north through Mexicali Mexico where it receives effluent and agricultural drainage, which continues north to the Salton Sea. The New River has been seriously impaired and polluted for many years. The problem is that the New River threatens human health.

SUGGESTED PROJECT

Conduct an analysis and feasibility study of use of alternatives and methodologies for restoring the New River. The end product will be a recommended restoration project and funding estimate.

ESTIMATED COST:

$2.1 Million, local share $1.1 Million.

CURRENT STATUS:

BECC Step I application submitted.
The project is currently waiting funding.

Salton Community Services District

Desert Shores -Replacement of Sewage Treatment Plant Facility And Sewer Mains

Agency Jurisdiction:

- Regional Water Quality Control Board
- State Water Resources Control Board

For Information Contact:

Mr. Henry P. Snyder
General Manager

Salton Community Services District
P.O. Box 5268
Salton City, CA 92275

Phone: (760) 394-4446
Fax : (760) 394-4242
E-mail: None available

ENVIRONMENTAL NEED/PROBLEM

A. Sea water intrusion form the Salton Sea has caused deterioration of sewer mains in the area. Also, sea water intrusion into the sewer collection system has been pumped into the oxidation/evaporation lagoons, said sea water has caused the total dissolved solids to increase the accepted guideline of 1200-1400 PPM to approximately 13,000 PPM.

Infiltration from the lagoons has caused ground water contamination which is in violation of Water Quality guidelines causing a cease and desist order by the local Water Quality Control Board. District will be required posthaste to correct above problems.

B. Sea water intrusion into lagoons caused by sea water being in collection system and pumped lagoons over the years. Sea water has caused total dissolved solids to increase from accepted levels of approximately 1,000 PPM to 13,000 PPM. Infiltration of salts into the ground water basin has affected ground water quality which is not acceptable to the local quality guidelines. This has caused a cease and desist order by the quality Control Board which required the District to correct the problem.

SUGGESTED PROJECT

A. Sea water intrusion into existing sewer mains causing mains to disintegrate and need to be replaced.

1. CAPRI LANE - Desert Shores and ACAPULCO LANE - Desert Shores

   a. Replacement of approximately 2000' of 8" sewer main in each residential area.

   b. Project will remove problem of sea water intrusion and eliminate operation and maintenance costs.

ESTIMATED COST:

$100,000.00 for each residential area; Total: $200,000.00

CURRENT STATUS:

Projects not in design, preliminary engineering study completed.
Construction estimated to begin approximately September 1998

SUGGESTED PROJECT

B. Desert Shores Treatment Plant - Relining lagoons and/or replacement of lagoons with primary/ secondary treatment plant

Proposed project is to either install linings in the seven oxidation/evaporation ponds to prevent the infiltration into the ground water and/or build a new primary secondary treatment plant (package plants possibly)

ESTIMATED COST:

$200,000 to $400,000

CURRENT STATUS:

Engineering study has been completed but no design at this time. Estimated construction will be September 1999 to July 2000.

City of Westmorland

Water Treatment Plant Upgrade

Agency Jurisdiction:

- California Department of Health Services

For Information Contact:

Mr. Robert McKay
City Manager

P.O. Box 699
Westmorland, CA 92281

Phone: (760) 344-3411
Fax: (760) 344-5307
E-mail: westmorl@brawleyonline.com

ENVIRONMENTAL NEED/PROBLEM

The City of Westmorland is under an order from the Department of Health Services (DHS) to meet compliance with current State standards.

SUGGESTED PROJECT

Upgrade of current water treatment plant will be enable the City to meet requirements from the Department of Health Services.

ESTIMATED COST:

$3,700,000

CURRENT STATUS:

Preliminary design and engineering and planning are complete. The City is in the process of determining the best funding sources for this project as well as the analyzing the possibility of regionalization with other nearby communities.